

**REMARKS**

The Official Action mailed December 31, 2003, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to April 30, 2004. Accordingly, the Applicant respectfully submits that this response is being timely filed.

Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on April 12, 2000; June 17, 2002; July 17, 2002; August 14, 2002; January 27, 2003; and August 21, 2003. However, Applicant has not received acknowledgment of the Information Disclosure Statement filed on December 8, 2003. Applicant respectfully requests that the Examiner provide an initialed copy of the Form PTO-1449 evidencing consideration of the Information Disclosure Statement filed on December 8, 2003.

Applicant further appreciates the Examiner's time in conducting a personal interview on April 15, 2004 and is in receipt of the *Interview Summary* mailed April 21, 2004. While the Interview Summary is generally accurate, the Applicant believes some clarification, as provided in the following remarks, is appropriate.

Claims 1-14 and 25-50 were pending in the present application prior to the above amendment. New claims 51-64 have been added to recite additional protection to which the Applicants are entitled. Accordingly, claims 1-14 and 25-64 are now pending in the present application, of which claims 1, 2, 25, 26, 39, 40, 51, and 52 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 4 of the Official Action provisionally rejects claims 1-14 and 25-50 under the doctrine of obviousness-type double patenting over claims 1-13 of co-pending U.S. Patent Application Serial No. 09/837,324 (now U.S. Patent 6,706,544) to Yamazaki et al. In that the '324 application has now issued, it is understood that this rejection would no longer be provisional.

As stated in MPEP § 804, under the heading "Obviousness-Type," in order to form an obviousness-type double patenting rejection, a claim in the present application must define an invention that is merely an obvious variation of an invention claimed in the prior art patent, and the claimed subject matter must not be patentably distinct from the subject matter claimed in the patent. Also, the patent principally underlying the double patenting rejection is not considered prior art.

The Applicants respectfully traverse the obviousness-type double patenting rejection because the claims of the present invention are patentably distinct from the claims of the '544 patent. Specifically, the claims of the '544 patent recite a method for fabricating a light emitting device. To the contrary, the pending claims of the present application recite a light emitting device. Thus, it is respectfully submitted that the device claims of the subject application are not obvious in view of the method claims of the '544 patent.

In addition, the subject double patenting rejection is improper based on the *Restriction Requirement* issued in the Official Action mailed July 17, 2002 in the subject application. In that *Restriction Requirement*, the Examiner restricted method claims that are similar to the method claims issued in the '544 patent and noted that "the process of Group II [the non-elected method claims] could be used to make a passive matrix type EL light emitting device; while the device of Group I [the elected device claims] could be made by adding impurity element to the semiconductor film using a photoresist as a mask. Because these inventions are distinct for the reasons given above and have acquired separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper." Thus, this *Restriction Requirement* admits that the methods claims of the '544 patent are patentably distinct from the device claims of the subject application and therefore the obviousness-type double patenting rejection is improper. Favorable reconsideration is requested.

Paragraph 6 of the Official Action rejects claims 1, 2, 5-8, 13, 14, 39, 40, 43, 44, 49, and 50 as obvious based on the combination of U.S. Patent No. 6,288,413 to Kamiura et al. and JP Application No. 07-072675 ("Toshiba"). The Applicants

respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. As noted during the interview, the subject invention is directed to a light emitting device as shown, for example, in Figure 1D of the subject application. As shown therein and as recited in claim 1, for example, the subject invention includes a gate electrode having a first conductive film provided over a gate insulating layer, and a second conductive film provided over the first conductive film. The Official Action relies on layer 8 of Kamiura to correspond to the claimed first conductive film. However, layer 8 is clearly not part of gate electrode 4 and there is no suggestion to modify layer 8 so as to cause it to function as part of the gate electrode. Therefore, since the prior art fails to disclose or suggest each and every feature of the

present invention, it is respectfully submitted that the Official Action has failed to establish a *prima facie* case of obviousness and reconsideration is requested.

It is respectfully submitted that the Official Action has further failed to provide a sufficient showing that one of skill in the art would have been motivated to combine the references to achieve the present invention. As noted during the interview, the present invention, as claimed, is directed to a light emitting device. The *Interview Summary* indicates that the present invention is directed to a LED and it should be clarified that this refers to a "light emitting device" (including an electroluminescent device, for example) and should not be limited to a "light emitting diode," for which LED is a popular acronym.

In any event, both Kamiura and Toshiba are directed to liquid crystal type devices and are not specifically directed to light emitting devices. It is respectfully submitted that one of skill in the art would not have been motivated to modify the teachings of Kamiura and Toshiba in order to achieve the light emitting device as claimed in the subject application.

It is further noted that the processes disclosed in each of Kamiura and Toshiba are different from each other in that one reference employs a self-alignment technique in the formation of the disclosed device, which the other does not use such a technique. It is respectfully submitted that it would be difficult or impossible to combine the teachings of these references to achieve a device as recited in the subject application. Thus, not only is there a clear lack of motivation in the references to combine the reference teachings, technical challenges that would confront one of skill in the art attempting to combine the reference teachings would tend to rebut any motivation that could be found.

It should also be noted that both Kamiura and Toshiba are assigned to the same entity, Toshiba Corporation. Toshiba was published in October, 1996, more than 2 years before Kamiura was filed in the United States. The Official Action asserts that it would have been obvious to modify the device of Kamiura to include a second conductive film as disclosed in Toshiba because it aids in improving the element speed.

If such motivation were proper, however, it is completely unclear why Kamiura would not have disclosed such a combination, particularly since Kamiura is also assigned to Toshiba. For this further reason, it is respectfully submitted that the Official Action has failed to provide a sufficient showing that one of skill in the art would have been motivated to combine Kamiura and Toshiba to achieve the present invention.

Paragraph 7 of the Official Action rejects claims 3, 4, 41, and 42 as obvious based on the combination of Kamiura et al. in view of Toshiba and U.S. Patent No. 5,627,084 to Yamazaki et al. The Official Action cites Yamazaki for the disclosure of the use of various conductive films comprising tantalum, titanium, and tungsten (column 3, lines 7-43 and column 5, lines 14-24) and asserts that it would be obvious to modify Kamiura to include various conductive films of tantalum, titanium, and tungsten since it aids in formatting the gate electrode.

Applicant respectfully disagrees. In addition to the reasons noted above for independent claims 1 and 2, it is respectfully submitted that Yamazaki fails to provide any motivation to one of skill in the art to specifically select the materials claimed for the first and second conductive films and to then modify the improper combination of Kamiura and Toshiba to use these films in the claimed gate electrode. It should be noted that the specific materials recited in claims 3 and 4 have advantageous etching characteristics that facilitate to formation of the claims device. While Yamazaki broadly discloses a number of alternative materials, there is no suggestion that one of skill in the art should select the specific materials claimed and then modify Kamiura and Toshiba to achieve the present invention. Absent a further showing of such motivation, it is respectfully submitted that the Official Action has failed to establish a *prima facie* case of obviousness and reconsideration is requested.

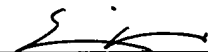
Paragraph 8 of the Official Action rejects claims 9, 10, 45, and 46 as obvious based on the combination of Kamiura et al. in view of Toshiba and U.S. Patent No. 5,717,224 to Zhang. Paragraph 9 of the Official Action rejects claims 11, 12, 47, and 48 as obvious based on the combination of Kamiura et al. in view of Toshiba, Zhang, and

U.S. Patent No. 6,238,754 to Shohara et al. Paragraph 10 of the Official Action rejects claims 25, 26, 29-32, and 35-38 as obvious based on the combination of Kamiura et al. in view of Toshiba, and Shohara et al. Paragraph 11 of the Official Action rejects claims 27 and 28 as obvious based on the combination of Kamiura et al. in view of Toshiba, Shohara et al, and Yamazaki et al. Paragraph 12 of the Official Action rejects claims 33 and 34 as obvious based on the combination Kamiura et al. in view of Toshiba, Shohara et al., and Zhang. In each case, it is respectfully submitted that the secondary references are insufficient to overcome the deficiencies noted above and reconsideration is requested for these same reasons.

Finally, new claims 51-64 are added to complete the scope of protection. These claims further recite that the gate insulating layer has a greater thickness over the channel forming region than over the n-type impurity region (a). It is respectfully submitted that this feature is neither disclosed nor suggested by the prior art of record and favorable consideration is requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

  
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